ultraviolet light a composition [comprising] consisting essentially of glutathione and a cosmetic carrier, the blend ratio of glutathione in the [immunopotentiator] composition, on a dry basis, being 0.005-20.0 wt%.

Kindly amend Claims 16 and 17 as follows:

Claim 16, line 2, delete "immunopotentiator";

Claim 17, line 1, delete "immunopotentiator",

Claim 17, line 2, delete "composition" and insert -- cosmetic carrier --.

REMARKS

Appreciation is hereby expressed to Examiner Prats for the interview so courteously granted on June 7, 2000. The Examiner is thanked for his courtesies and professionalism in granting applicant's counsel sufficient time to discuss all of the issues in this case. Pursuant to that interview, Claim 18 has been canceled and Claims 1 and 15 rewritten to more definitely set forth the invention and make a number of amendments discussed at the interview.

Support for the amendment of Claims 1 and 15 can be found in the Specification in Example 1 on pages 14 and 15 of the Specification. The present amendment is deemed not to introduce new matter. Claims 1-17 are in the application, Claims 5-14 having been withdrawn from consideration as being directed to non-elected inventions.

Reconsideration is respectfully requested of the rejection of claims 1-4 and 15-17 under 35 U.S.C. § 112, first paragraph. Independent claims 1 and 15 have been rewritten along the lines discussed at the interview in an effort to overcome this rejection. It is believed that the claims now in the case are no longer subject to this rejection which is now believed to be moot. Withdrawal of the rejection is accordingly respectfully requested.

Reconsideration is respectfully requested of the rejection of claims 15-18 under 35 U.S.C. § 112, second paragraph, as being indefinite. Claim 15 has been rewritten to delete reference to "controlling immunosuppression" and, instead, calling for a method of treatment for alleviating a reduction in immuno functions. Support for this specific language can be found in the Specification on page 4, lines 10-16. It is believed that the claims as rewritten obviate the rejection which is now believed to be moot. Accordingly, withdrawal of the rejection is respectfully requested.

Reconsideration is respectfully requested of the rejection of Claims 1-4 and 15-18 under 35 U.S.C. § 102(a) as being anticipated by Hersh, et al.

As discussed at the interview, there is no disclosure whatever in the Hersh, et al. reference of the method of treatment for prevention of immunosuppression due to contact of the skin by ultraviolet light.

It is respectfully submitted that the Hersh, et al. reference

is concerned with the protection from X-ray induced skin damage using glutathione with L-selenomethionine in a suitable carrier. It is respectfully submitted that there is no disclosure whatever that glutathione can be used alone for protection against X-ray induced skin damage, or that glutathione alone or in any combination with any other material can be used in a treatment for prevention of immunosuppression due to contact of the skin by ultraviolet light by applying to the skin before or during exposure to ultraviolet light an endermic liniment consisting essentially of glutathione. On the contrary, that teaching or suggestion comes only from the present application and constitutes the important element or aspect of the present invention.

In view of the foregoing, it is respectfully submitted that the Hersh, et al. reference neither anticipates nor renders unpatentably obvious the subject matter called for in the claims herein. Accordingly, the Examiner would be justified in no longer maintaining the rejection. Withdrawal of the rejection is accordingly respectfully requested.

Reconsideration is respectfully requested of the rejection of Claims 1-4 and 15-18 under 35 U.S.C. § 102(b) as being anticipated by Matsuura, et al. or Hara, et al. or Oyama, et al.

As mentioned in the previous amendment, neither the Matsuura, et al. or the Hara, et al. references are concerned with a method of treatment for prevention of immunosuppression due to contact to the skin by ultraviolet light. This is particularly important

because Matsuura, et al. discloses numerous uses for glutathione but omits any reference to the method of the present invention. In particular, Matsuura, et al. discloses that glutathione can be used for (1) protection from radiation, (2) detoxification of poisons, (3) inhibition of lipid peroxidation by glutathione peroxidase, (4) inhibition of melanin pigment formation, (5) as a component of cosmetics, (6) as a cleansing powder, and (7) as a whitening powder.

As for the Hara, et al. reference, it is concerned with using oxidized glutathione for whitening, and discloses that glutathione shows a melanin formation inhibitory activity against melanoma cells.

Despite the fact that glutathione has been used for many purposes, it is particularly significant that it has not been used for the purpose as claimed herein. That is, the purpose of treatment for prevention of immunosuppression due to contact to the skin by ultraviolet light, or as a treatment for alleviating reduction in immune functions due to contact to the skin by ultraviolet light.

As for the Oyama, et al. reference, applicant is making of record the fact that during the interview the tests described in the Oyama, et al. reference were discussed and compared with tests in the present application.

In particular, applicant pointed to the tests set forth in Example 2 in which thirty healthy men and women had the inner side

of their right upper arm exposed to radiation with ultraviolet rays. Importantly, after the irradiation, the so-called vanishing cream was applied every day to the irradiated site three times per day and after three weeks the degree of pigmentation of the test site was observed with naked eyes.

At this point, it is important to note that the so-called vanishing cream comprised numerous different compositions which are set forth in Table 2 of the Oyama, et al. reference. The test compositions in the Oyama, et al. reference, Example 2, include kojic acid ester together with other components. Table 2 in Example 2 of the Oyama, et al. reference clearly shows that treatment with only glutathione had very little effect as evidenced by the fact that only four volunteers rated such a composition as effective whereas twenty-six rated it as non-effective.

In contrast, when the glutathione was combined with either kojic acid monostearate or kojic acid dipalmitate in Example 2, it can be seen that the mixture was rated by at least some of the volunteers as being very effective and by a substantial number of the volunteers as being effective. The results shown in Table 2 also clearly show that glutathione alone, when applied after radiation, is ineffective as a melanin synthesis-inhibiting agent.

These tests in the Oyama, et al. reference were then compared with Example 1 on pages 14 and 15 of the present application in which glutathione was added to the T cells during the ultraviolet light radiation to study the protection effect of glutathione

against the suppression of the antigen presentation function of Langerhans' cells by ultraviolet light.

It became clear during the discussion at the interview of the tests in the present invention that the present invention is effective before or during exposure of the skin to ultraviolet radiation whereas the Oyama, et al. composition was applied after irradiation to ultraviolet light. This distinction has been highlighted in the amendment of Claims 1 and 15 by reciting that the composition containing glutathione is applied to the skin before or during exposure of ultraviolet light. This is believed to distinguish the present invention from the method disclosed in Oyama, et al. reference. In addition, the expression "comprising" has been changed to "consisting essentially of" to more clearly distinguish from the Oyama, et al. reference. As presently written, the claims herein are believed to exclude the kojic acid or its derivatives which are required in the composition of the Oyama, et al. reference.

During discussions at the interview, the Exminer pointed out that he may continue to apply the Oyama, et al. reference since it still uses glutathione. However, it was pointed out at the interview that the Oyama, et al. reference, if anything, shows that glutathione when applied alone in the absence of kojic acid or kojic acid derivatives is ineffective as a treatment for exposure to ultraviolet light.

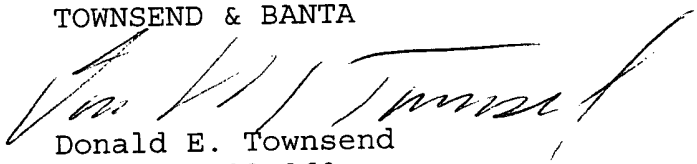
Therefore, it is believed that with these changes the claims

now in the application clearly distinguish from the Oyama, et al. reference, and that none of these references anticipate or render unpatentably obvious the subject matter now called for in the claims herein. Withdrawal of the rejection is accordingly respectfully requested.

In view of the foregoing, it is respectfully submitted that the application is now in condition for allowance and early action and allowance thereof is accordingly respectfully requested. In the event that there is any reason why the application cannot be allowed at the present time, it is respectfully requested that the Examiner contact the undersigned listed below.

Respectfully submitted

TOWNSEND & BANTA



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